CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.05/GR/CEMENT/2014-15 Date: 13.08.2014

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. Gopireddy,** Contractor, Bangalore.
NAME OF THE WORK	:	Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.
REFERENCE	:	AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	140 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	470 Minutes	Not More than 600 Minutes
3	Soundness by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

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Job No.: CTCE/BBMP/WNo.05/GR/SAND/2014-15 : 13.08.2014

TEST REPORT ON FINE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Gopireddy,** Contractor, Bangalore.

Name of Work : Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014

Date of Testing : 13.08.2014

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	93	4.65	4.65	95.4	90-100
2.36	196	9.80	14.45	85.6	75-100
1.18	458	22.90	37.35	62.7	55-90
600 Micron	466	23.30	60.65	39.4	35-59
300 Micron	523	26.15	86.80	13.2	8-30
150 Micron	203	10.15	96.95	3.0	0-10

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Job No.: CTCE/BBMP/WNo.05/GR/AGG/2014-15 : 13.08.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Gopireddy,** Contractor, Bangalore.

Name of Work : Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014

Date of Testing : 13.08.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	890	3.56	3.56	96.44	95-100
20	16050	64.20	67.76	32.24	30-70
10	5020	20.08	87.84	12.16	10-35
4.75	2500	10.00	97.84	2.16	0-5

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Job No.: CTCE/BBMP/WNo.05/GR/AGG/2014-15 : 13.08.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. Gopireddy,** Contractor, Bangalore.
Name of Work	: Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014
Date of Testing	: 13.08.2014
Material	: 20mm Aggregates

Total Wt. of Aggregates in gms= **5000**

Tabel - 1

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
40	0	0	0	100	100
20	190	3.80	3.8	96.20	95-100
10	3165	63.30	67.1	32.90	25-55
4.75	1485	29.70	96.8	3.20	0-10

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Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/WNo.05/GR/STEEL/2014-15 13.08.2014

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Gopireddy,** Contractor, Bangalore.
Name of the work	:	Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	:	AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014
Date of Test	:	13.08.2014
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	515	558	13.40	O.K	O.K

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Job No.: CTCE/BBMP/WNo.05/GR/CUBE/2014-15

21.08.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. Gopireddy,** Contractor, Bangalore.
Name of the work	: Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014
Sample ID	: Drain Slab Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.08.2014	21.08.2014	8.145	332.6	14.78
2	14.08.2014	21.08.2014	8.235	346.2	15.39
3	14.08.2014	21.08.2014	8.305	360.2	16.01

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NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

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Job No.: CTCE/BBMP/WNo.05/GR/CUBE/2014-15 21.08.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
Agency	: **Mr. Gopireddy,** Contractor, Bangalore.
Name of the work	: Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.
Reference	: AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014
Sample ID	: Drain Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 7^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	14.08.2014	21.08.2014	8.085	356.8	15.86
2	14.08.2014	21.08.2014	8.134	367.9	16.35
3	14.08.2014	21.08.2014	8.262	383.2	17.03

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Job No.: CTCE/BBMP/WNo.05/GR/WMM/Gradation/2014-15 16.08.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.

Agency : **Mr. Gopireddy,** Contractor, Bangalore.

Name of Work : Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.

Reference : AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014

Date of Testing : 16.08.2014

Material : WMM

Sample Location : WMM Mix Plant Oven Dry Wt (gm): 25625

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	889	889	3.5	96.5	95-100
22.4	6486	7375	28.8	71.2	60-80
11.2	5674	13049	50.9	49.1	40-60
4.75	4398	17447	68.1	31.9	25-40
2.36	3592	21039	82.1	17.9	15-30
0.600	2324	23363	91.2	8.8	8-22
0.075	1967	25330	98.8	1.2	0-8

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Job No.: CTCE/BBMP/WNo.05/GR/SDBC/Bitumen/2014-15 22.08.2014

BITUMEN CONTENT AND GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX AASHTO T 164 & AASHTO T 30

CLIENT	**Asst. Executive Engineer,** Byatarayanapura Sub Division, BBMP, Bangalore.
AGENCY	**Mr. Gopireddy,** Contractor, Bangalore.
NAME OF THE WORK	Improvements to road and drains at Babanagara Cross Roads in Ward No. 05, Byatarayanapura Sub Division, BBMP, Bangalore.
REFERENCE	AEE/Byatarayanapura/BBMP/73/2014-15 Dated: 13.08.2014
SAMPLE I/D	Babanagara Cross Roads in Ward No. 05
DATE OF TESTING	22.08.2014

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	476.5	476
3. Weight of Asphalt and Mineral matter Extracted,	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	23.5	24.00
7. Bitumen content in %	4.70	4.80
8. Average	4.75	

GRADATION AFTER EXTRACTION

SIEVE SIZE	Trail 1				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	24.65	5.17	5.17	94.83	90-100
4.75	241.57	50.70	55.87	44.13	35-51
2.36	48.69	10.22	66.09	33.91	24-39
1.18	52.26	10.97	77.06	22.94	15-30
0.3	41.13	8.63	85.69	14.31	9-19
0.075	39.96	8.39	94.07	5.93	3-8

SIEVE SIZE	Trail 2				JOBMIX
mm	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	Gradation
13.2	0	0	0	100	100
9.5	23.67	4.73	4.73	95.27	90-100
4.75	236.49	47.30	52.03	47.97	35-51
2.36	95.48	19.10	71.13	28.87	24-39
1.18	46.12	9.22	80.35	19.65	15-30
0.3	26.34	5.27	85.62	14.38	9-19
0.075	37.85	7.57	93.19	6.81	3-8

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